

U.S. Appln No. 10/720,005
Page 6

This listing of claims will replace all prior versions and listings of claims in the reissue application:

Listing of Claims:

1. (Currently amended) In a PEM fuel cell having at least one cell comprising a pair of opposite polarity electrodes, a membrane electrolyte [intedacent] interjacent said electrodes for conducting ions therebetween, and an electrically conductive contact element having a working face confronting at least one of said [electrodessfor] electrodes for conducting electrical current from said one electrode, the improvement comprising: said contact element comprising a corrosion-susceptible metal substrate and an electrically conductive, corrosion-resistant protective coating on said face to protect said substrate from the corrosive environment of said fuel cell, said protective coating comprising a mixture of electrically conductive particles dispersed throughout an oxidation-resistant and acid-resistant, water-insoluble polymeric matrix and having a resistivity no greater than about 50 ohm-cm, said mixture comprising graphite particles having a first particle size and other electrically conductive particles selected from the group consisting of gold, platinum, nickel, palladium, rhodium, niobium, titanium carbide, titanium nitride, titanium diboride, chromium-alloyed titanium, nickel-alloyed titanium, rare earth metals and carbon, said other particles having a second particle size less than said first particle size to enhance the packing density of said particles.

U.S. Appln No. 10/720,005

Page 7

2. (Original) A fuel cell according to claim 1 wherein said carbon comprises carbon black.

3. (Original) A fuel cell according to claim 1 wherein said coating is electrophoretically deposited onto said substrate from a suspension of said particles in an aqueous solution of acid-solubilized polymer.

4. (Original) A fuel cell according to claim 1 wherein a discrete film of said coating is laminated onto said substrate to form said electrically conductive contact element.

5. (Original) A fuel cell according to claim 1 wherein a precursor of said coating is deposited onto said substrate from a solution thereof, dried and cured to form said coating.

6. (Original) A fuel cell according to claim 1 wherein said substrate comprises a first acid-soluble metal underlying a second acid-insoluble, passivating metal layer susceptible to oxidation in said environment.

7. (Original) A fuel cell according to claim 1 wherein said polymer matrix is selected from the group consisting of epoxies, silicones, polyamide-imides, polyether-imides, polyphenols, fluoro-elastomers, polyesters, phenoxy-phenolics, epoxide-phenolics, acrylics and